

Opossum Shrimps as Live Fish Food

By Joseph Boucher

There is only two known species of fresh water Opossum Shrimps in North America such as *Mysis relicta* which is also known as *M. oculata* of the Great Lakes, and the smaller *Neomysis mercedis* of the West Coast. They both are an important natural food of many game fishes, and they also make an excellent life food for large aquarium fishes. I once knew a young amateur culturist who raised the *M. relicta* in tubs, and sold them as bait to fishermen instead of minnows, and he also raised the smaller and more prolific *N. mercedis* as live food for aquarium fishes.

Opossum Shrimps are cold water crustaceans that inhabits deep lakes, where the deeper water remains at 55 to 60 degrees F. during the summer, and where they stay near the bottom in daytime and migrate to the surface and shallow water at sundown, and can endure temperatures of up to 70 degrees F. for several hours while feeding. Their natural food consist of unicellular green algae, Diatom algae, protozoans, small crustaceans, and loose organic detritus, which are ingested whole while swimming. In their natural habitats they usually swim in schools, and are best collected by netting them with the floating plankton at night or at sundown on a cloudy day. *Mysis relicta* are common in the Great Lakes, Lake Waterton in Montana, Green Lake in Wisconsin, and Finger Lakes in N. York. *Neomysis mercedis* are common in deep inland lakes in California, Washington, and Oregon. There is also several South American species that are reputed to be more prolific and would better withstand the warmer temperature encountered in aquarium cultures.

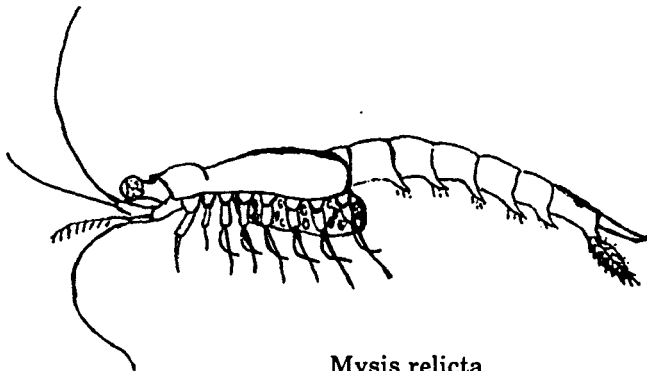
Mysis relicta grows to about 30 millimeters long and is recognized by its short carapace that barely covers the thorax, the exposed flexible abdomen is segmented into 6 sections each having a pair of short ventral appendages, and the abdomen terminates into a wide bifurcated tipped telson, and a pair of flattened uropods, their head is ornamented with a pair of large stalked compound eyes, and two pairs of double antennae, and the brood pouch of the female is located between its swimming legs. *Neomysis mercedis* only grows to 15 mm. long, and its body shape is similar except for its telson which terminates into a narrow pointed tip.

The breeding season of the Opossum Shrimps in their natural habitats occurs during the cold months from October through May, and the females produce undetermined batches of about 40 eggs, which are held in her brood pouch until they hatch, and the youngs are released when she molts and are then able to manage by themselves. The youngs start breeding when they reach half the size of their full grown adult size, but they produce less eggs at that size. The life span of the adults is completed in about 2 years, but it has not been determined how many broods of youngs the females produce during their life span. The males are fewer and smaller than the females, and they mate while swimming which seems to occur at night.

They can be cultured in large aquariums set in a cool basement and filled with aged tap water and 1½" of fine aquarium gravel on the bottom and planted with a row of Vallisnaria at the back to serve as a hiding place and imitate the plant growth in their natural habitats. Provide

constant aeration and about 10 hours daily of illumination with a Grolux fluorescent light, maintain the temperature from 60 to 65 degrees F., and partially change the water every 2 weeks. And feed them moderately with dietary products that drops on the bottom and breaks apart into fine eatable particles, such as Desiccated Liver tablets, Alfalfa or Spinach tablets, and veterinary Calcium tablets (Calcidee), which are ingested while swimming near the bottom. And supplement their diet with occasional feeds with Brine Shrimp Nauplii, and other small cultured organisms such as *Ceriodaphnia pulchella*, small species of Bominas, free suspended Diatom Algae, and large Protozoans.

Starting cultures of Opossum Shrimps are not available from commercial culturists and they will have to be collected from your local waters. They are not the easiest and most prolific crustaceans to culture, but they offer a challenge to adventurous culturists to experiment with them, and apply their skill in forcing them into a more prolific existence and making them more profitable to culture.



Mysis relicta